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09/849,831	05/04/2001	Billy R. Masten		2256

7590 07/21/2003  
Dorsey L. Baker  
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Lubbock, TX 79416

EXAMINER

EVANS, FANNIE L

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 07/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/849,831

Applicant(s)

MASTEN, BILLY R.

Examiner

F. L. Evans

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 is/are allowed.
- 6) ☒ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 7,9 and 17 is/are objected to.
- 8) ☐ Claim(s) 5,6,8,10-16 and 18-53 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on May 4, 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,6,7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***The Preliminary Amendments***

The preliminary amendments filed on June 19, 2001 and June 3, 2002 have been entered.

### ***Claim Objections***

Claims 7, 9 and 17 are objected to under 37 CFR § 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Claim 7 fails to further limit the subject matter of a previous claim in that it specifies transmitting the spectral distribution in a digital state while claim 6, from which claim 7 depends, specifies transmitting the spectral distribution in an analog state. Claims 9 and 17 fails to further limit the subject matter of a previous claim in that claims 9 and 17 depend from claims 9 and 17, respectively. Applicant is required to cancel the claims or amend the claims to place them in proper dependent form.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 42-46 and 50 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The lack of an antecedent for "A digital identifier as recited in claim .." in line 1 of claims 42-46, "said digital identifier" bridging lines 1 and 2 of claim 42 and "said array" in line 2 of claim 50 renders these claims and any claim dependent therefrom indefinite.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 8, 10-15, 25-31, 41-49 and 51-53 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Fachinger et al (US 5,528,363).

Fachinger et al disclose a device for the detection and identification of objects (entities) comprising a sensing device having a diffraction device and an array; a micro-controller (7) having memory elements for receiving digital signals reflecting wide spectral distribution of light segments reflected from at least one object (entity) and digital signals reflecting spectral distributions of light segments reflected from other objects (entities); and logic circuitry including memory containing instructions for comparing the spectral distributions of the light segments with one another and generating an output of the results of the comparison.

Applicant's attention is directed Fachinger et al in its entirety with particular attention directed to the paragraph bridging columns 1 and 2, lines 47-51 in column 2, lines 31-67 in column 3 and lines 1-27 in column 4. The device of Fachinger et al performs the method of claims 13-15.

Claims 16, 18, 21, 22 and 24 are rejected under 35 U.S.C. § 102(e) as being clearly

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anticipated by Wright et al (US 5,991,025).

Wright et al disclose an apparatus for accumulating a transmitting a wide spectral analysis comprising a housing; a diffraction device; sensor array (90); and a transmittal device (94) connected to the array for transmitting the a spectral distribution to a remote analytical device (92). Applicant's attention is directed to lines 50-63 in column 5 and lines 15-30 in column 8. The apparatus of Wright et al performs the method of claims 21, 22 and 24.

Claims 33 and 34 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Kelderman et al (US 4,844,617).

Kelderman et al disclose an apparatus for obtaining a spectral distribution of an object comprising a sensing unit (44, 50, 52) for receiving reflected light (48) and having a diffraction device (50); a linear array (52) mounted in the path diffracted light; and a target light (58) positioned adjacent to the sensing unit for emitting upon the source of the reflected light. The target light is directed in the opposite direction of the reflected light. See Fig. 10 and the text pertaining thereto in the paragraph bridging columns 8 and 9, and lines 14-27 of column 10.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 6 and 18-24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shestock (US 5,774,209) in view of Shestock et al (EP 0836133 A2).

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Shestock discloses a device comprising a housing (10) having an opening; a diffraction device (40); an array (42); and a pin connector (17) mounted in the back wall of the housing. The pin connector is part of a communication circuit for transmitting spectral fingerprints to an electronic memory in a computer. Applicant's attention is directed to lines 38-50 in column 2 and lines 13-21 in column 3.

Shestock et al disclose the computer with a docking station specified in lines 40 and 41 of column 2 of Shestock. The spectrophotometer of Shestock docketed in the computer of Shestock et al reads on the claimed apparatus and method. See line 32 in column 6 of Shestock et al for the use of a R 232 port in the communication circuit.

Claim 32 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Fachinger et al (US 5,528,363) in view of Shestock et al (EP 0836133 A2).

Fachinger et al disclose a device for the detection and identification of objects (entities) comprising a sensing device having a diffraction device and an array; a micro-controller (7) having memory elements for receiving digital signals reflecting wide spectral distribution of light segments reflected from at least one object (entity) and digital signals reflecting spectral distributions of light segments reflected from other objects (entities); and logic circuitry including memory containing instructions for comparing the spectral distributions of the light segments with one another and generating an output of the results of the comparison.

Applicant's attention is directed Fachinger et al in its entirety with particular attention directed to the paragraph bridging columns 1 and 2, lines 47-51 in column 2, lines 31-67 in column 3 and lines 1-27 in column 4. Fachinger et al do not disclose transmitting the spectral distribution

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through a RS 232 port.

Shestock et al disclose the use of a RS 232 port to transmit spectral distributions from a spectrometer to a computer for further processing. See line 32 of column 6 of Shestock et al.

At the time the invention was made, it would have been obvious to one with ordinary skill in the art provide the device of Fachinger et al with a RS 232 port if it was desired to analyze/process the spectral distributions using a personal computer. Such a port was conventionally used for that purpose as evidenced by the disclosure of Shestock et al.

Claims 35-40 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Feyaerts et al (EP 0949490 A1) in view of Kelderman et al (US 4,844,7617).

Feyaerts et al disclose a spectrum image device comprising a housing (inherent) for receiving light from an object and containing a diffraction device (7); an image array (2) for receiving separated wavelength segments and recording the magnitude thereof as an image; and an electronic identifier (3). Feyaerts et al do not disclose a aiming device associated with the spectrum image device. Applicant's attention is directed to Feyaerts et al in its entirety.

Kelderman et al disclose an apparatus for obtaining a spectral distribution of an object comprising a sensing unit (44, 50, 52) for receiving reflected light (48) and having a diffraction device (50); a linear array (52) mounted in the path diffracted light; and a target light (58) positioned adjacent to the sensing unit for emitting upon the source of the reflected light. The target light is directed in the opposite direction of the reflected light. See Fig. 10 and the text pertaining thereto in the paragraph bridging columns 8 and 9, and lines 14-27 of column 10.

At the time the invention was made, it would have been obvious to one with ordinary

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skill in the art to provide the spectrum image device of Feyaerts et al with an aiming device to make sure that the reflected light is coming from the desired object(s). Such an aiming device was well known in the art of spectroscopy as evidenced by Kelderman et al.

***Allowable Subject Matter***

Claims 1-4 are allowed over the prior art of record.

As to claim 1, the prior art of record, taken alone or in combination, fails to disclose or render obvious a wide spectrum plant identifier comprising a sensing device and a digital identifier arranged and operable as set forth in claim 1.

***The Information Disclosure Statements***

The prior art cited in the information disclosure statements filed on June 19, 2001, January 29, 2002 and June 3, 2002 has been considered.

***Additional Prior Art***

Jaffe et al (US 3,100,264) and Davies (US 5,329,595 and US 5,717,487) disclose spectral identification systems. Weston (US 4,968,143) and Chang et al (US 5,394,237) disclose ports for spectrometers. See the paragraph bridging columns 6 and 7 of Weston and the paragraph bridging columns 3 and 4 of Chang et al.

***Fax/Telephone Numbers***

Papers related to this application may be submitted to Technology Center 2800 by facsimile transmission. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The fax numbers for Technology Center 2800 are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

If applicant wishes to send a fax containing a Proposed Amendment for discussion during either a personal interview or a telephone interview then the fax should:



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- 1) Contain either the statement "**DRAFT**" or "**PROPOSED AMENDMENT**" on the Fax Cover Sheet; and
- 2) Should be unsigned by the attorney or agent.

This will ensure that the amendment will not be entered into the application and will be forwarded to the examiner as quickly as possible.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to the examiner whose telephone number is (703) 308-4805. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font, can be reached on (703) 308-4881. The TC Receptionist's telephone number is (703) 308-0956.

Any other inquiry of a technical nature, and all inquiries of a general nature including those relating to the status of an application should be directed to TC 2800 Customer Service Office whose telephone number is (703) 306-3329.

  
**F. L. EVANS**  
**PRIMARY EXAMINER**  
**ART UNIT 2877**

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July 13, 2003